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Vermiculite

UNITED STATES DEPARTMENT OF THE INTERIOR

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Vermiculite

By Arthur C. Meisinger[1]

U.S. production of vermiculite concentrate declined slightly to 303,000 short tons valued at $33.1 million. Sales of exfoliated vermiculite were slightly lower than that of 1986, but the average value per ton increased. South Carolina replaced Montana as the leading State in vermiculite concentrate production.

Domestic Data Coverage.—Domestic production data for vermiculite are developed by the Bureau of Mines from two separate voluntary surveys, one for domestic mine operations and the other for exfoliation plant operations. Of the five mining operations to which a survey request was sent, four responded. The one nonrespondent's data were estimated using previous years' production levels adjusted by trends in employment and other guidelines. Of the 41 exfoliating plants to which a survey request was sent, 37 responded. Those respondents accounted for 85% of the total exfoliated vermiculite sold and used shown in table 1. The four nonrespondents' data were estimated using previous years' production levels adjusted by trends in employment and other guidelines.

Table 1.—Salient vermiculite statistics

(Thousand short tons and thousand dollars unless otherwise specified)

		1983	1984	1985	1986	1987
United States:						
Sold and used by producers:						
Concentrate		282	315	314	317	303
Value		$27,200	$31,500	$32,400	$34,400	$33,105
Average value[1]	dollars per ton	$96.45	$100.00	$103.18	$108.52	$109.24
Exfoliated		224	264	258	253	252
Value		$52,200	$56,570	$47,900	$53,200	$54,600
Average value[1]	dollars per ton	$233.04	$214.02	$185.66	$210.28	$216.67
Exports to Canada		19	22	e23	e25	e20
Imports for consumption		e24	32	e28	e35	e30
World: Production[2]		490	545	556	p579	e601

eEstimated. pPreliminary.
[1]Based on rounded data.
[2]Excludes production by centrally planned economy countries.

DOMESTIC PRODUCTION

Production of vermiculite concentrate declined 4% to 303,000 tons valued at $33.1 million compared with 317,000 tons valued at $34.4 million in 1986.

W. R. Grace & Co. continued as the leading domestic producer with operations at Libby, MT, and Enoree, SC. Vermiculite was also mined in South Carolina by Patterson Vermiculite Co. near Enoree and by Strong-Lite Products Corp. near Woodruff. Increased production by the three South Carolina producers coupled with a decrease in output from the Libby mine in Montana made South Carolina the leading producing State. Virginia Vermiculite Ltd., Louisa County, VA, was the only other producer

during the year.

Domestic sales of exfoliated vermiculite by 12 producers declined slightly in quantity and increased slightly in value. Output came from 41 plants in 28 States, of which 29 plants in 24 States were operated by W. R. Grace.

In descending order of output sold and used, the principal exfoliated vermiculite-producing States were California, Ohio, South Carolina, Florida, New Jersey, and Texas.

CONSUMPTION AND USES

Apparent domestic consumption of vermiculite concentrate declined slightly from 327,000 tons to 318,000 tons.

The quantity of exfoliated vermiculite sold and used for agriculture increased slightly, while sales for aggregates, insulation, and other uses decreased slightly compared with 1986 quantities.

Table 2.—Exfoliated vermiculite sold and used in the United States, by end use

(Short tons)

End use	1986	1987
Aggregates:		
Concrete	50,800	49,200
Plaster	2,200	700
Premixes[1]	80,000	81,300
Total	133,000	131,200
Insulation:		
Loose-fill	21,000	19,600
Block	35,900	35,700
Other[2]	2,100	1,700
Total	59,000	57,000
Agricultural:		
Horticultural	19,700	23,100
Soil conditioning	5,300	8,100
Fertilizer carrier	33,500	30,600
Total	58,500	61,800
Other[3]	2,900	2,200
Grand total[4]	253,000	252,000

[1]Includes acoustic, fireproofing, and texturizing uses.
[2]Includes high-temperature and packing insulation and sealants.
[3]Includes various industrial uses not specified.
[4]Data may not add to totals shown because of independent rounding.

Table 3.—Active vermiculite exfoliating plants in the United States in 1986

Company	County	State
A-Tops Corp	Beaver	Pennsylvania.
Brouk Co	St. Louis	Missouri.
	Irondale	Alabama.
	Maricopa	Arizona.
	Pulaski	Arkansas.
	Alameda	California.
	Orange	Do.
	Denver	Colorado.
	Broward	Florida.
	Duval	Do.
	Hillsborough	Do.
	Du Page	Illinois.
	Campbell	Kentucky.
	Orleans	Louisiana.
	Prince Georges	Maryland.
W. R. Grace & Co., Construction Products Div	Hampshire	Massachusetts.
	Wayne	Michigan.
	Hennepin	Minnesota.
	St. Louis	Missouri.
	Douglas	Nebraska.
	Mercer	New Jersey.
	Cayuga	New York.
	Guilford	North Carolina.
	Oklahoma	Oklahoma.
	Multnomah	Oregon.
	Lawrence	Pennsylvania.
	Greenville[1]	South Carolina.
	Davidson	Tennessee.
	Bexar	Texas.
	Dallas	Do.
Intermountain Products Inc	Salt Lake	Utah.
Koos Inc	Kenosha	Wisconsin.
O. M. Scott & Sons	Union	Ohio.
Patterson Vermiculite Co	Laurens	South Carolina.
Robinson Insulation Co	Cascade	Montana.
The Schundler Co	Middlesex	New Jersey.
Strong-Lite Products Corp	Jefferson	Arkansas.
Do	DeKalb	Illinois.
Verlite Co	Hillsborough	Florida.
Vermiculite Products Inc	Harris	Texas.

[1]Two plants in the county.

PRICES

The average value of vermiculite concentrate sold and used by U.S. producers was $109 per ton, f.o.b. plant, the same as in 1986. The average value of exfoliated vermiculite, f.o.b. plant, increased slightly from $210 per ton to $217 per ton.

Engineering and Mining Journal quoted yearend prices for unexfoliated vermiculite as follows, per short ton: Montana and South Carolina, f.o.b. mine, $100 to $150; and the Republic of South Africa, c.i.f. Atlantic ports, $110 to $160.

FOREIGN TRADE

Imports of vermiculite concentrate from the Republic of South Africa were estimated to be 35,000 tons. Exports to Canada were estimated to be 20,000 tons. Exports represented about 7% of total U.S. sales.

[1]Industry economist, Branch of Industrial Minerals.

Table 4.—Vermiculite: World production, by country[1]

(Short tons)

Country[2]	1983	1984	1985	1986[p]	1987[e]
Argentina	4,355	4,906	5,387	5,740	5,500
Brazil	10,888	10,094	10,242	14,482	15,000
Egypt	331	[e]380	538	546	550
India	2,658	2,153	1,990	7,365	4,400
Japan[e]	19,000	19,000	19,000	[r]17,000	17,000
Kenya	[e]1,300	961	1,670	2,804	2,800
Mexico	440	557	474	[e]500	500
South Africa, Republic of	168,691	191,536	202,902	213,470	[3]252,278
United States (sold and used by producers)	282,000	315,000	314,000	317,000	[3]303,000
Total	489,663	544,587	556,203	578,907	601,028

[e]Estimated. [p]Preliminary. [r]Revised.

[1]Excludes production by centrally planned economy countries. Table includes data available through July 15, 1988.

[2]In addition to the countries listed, Tanzania may produce vermiculite, but available information is inadequate to make reliable estimates of output levels, if any.

[3]Reported figure.

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